

Remarks

Prior to this Amendment, Claims 1 and 4-11 were pending and under consideration. With this Amendment, Claims 1 and 11 are being currently amended. No claims are being canceled and added. Thus, after entry of this Amendment, Claims 1 and 4-11 remain pending and under consideration. The amendments to the claims and various objections and rejection are addressed in detail below.

Amendments of the Claims:

Claims 1 and 11 are amended to recite the invention with greater clarity. In particular, Claims 1 and 11 are amended to recite that the gas in the first gas flow path travels out of the outlet end of the inner tube and flows back at the closed end of the outer tube into the annular space. Support for this Amendment can be found for example, in FIG. 11 and the Specification at page 20. Thus no new matter is introduced by this amendment.

Claim Rejections under 35 U.S.C. § 103(a):

Claims 1, 4, 5, 8 and 11 stand rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Soichiro Kawakami (JP61037969) in view of Ohashi (JP10-177960). Applicants respectfully traverse.

In the Office Action, the Examiner clearly and correctly indicates, among other things, that Soichiro Kawakami does not teach

- iii. Soichiro Kawakami's inner tube extends a distance at least encompassing the arrays of orifices in the outer tube

Page 3 of the outstanding Office Action.

The Examiner does not point out in the outstanding Office Action, and in fact has never pointed out in any previous Office Actions during prosecution of the present application, that Ohashi compensates the deficiency of Soichiro Kawakami, which does not teach an inner tube

extends a distance at least encompassing the arrays of orifices in the outer tube. Therefore, the Examiner has failed to establish a *prima facie* obviousness under 35 U.S.C. 103(a), which requires, among other elements, that the prior art, either alone or in combination, must teach or suggest each and every limitation of the rejected claims. In re Vaeck, 20 USPQ2d 1438 (Fed. Cir. 1991); M.P.E.P. §706.02.

To recite the above feature with greater clarity without adding any new matter, instant Claims 1 and 11 are amended to read that the gas the first gas flow path travels out of the outlet end of the inner tube and flows back at the closed end of the outer tube into the annular space.

Neither Soichiro Kawakami nor Ohashi teach or suggest an inner tube extends a distance at least encompassing the arrays of orifices in the outer tube. Even one of ordinary skill attempts to combine Soichiro Kawakami and Ohashi, which Applicants submit that there is no teaching in either Soichiro Kawakami or Ohashi, or knowledge available to general public that would motivate one of ordinary skill to do so as presented in Applicants' responses to previous Office Actions, such combination will not arrive at the invention as recited in instant Claims 1 and 11.

This feature is one of the distinctive features of the gas delivery metering tube of the present invention. By this design, the gas flow divided into the inner tube travels out of the outlet end of the inner tube, flows back at the closed end of the outer tube into the annular space, and then exit the orifices in the outer tube. Thus, the present invention provides a gas delivery tube that delivers gases at opposite ends of the tube *using only a single gas inlet at only one end of the tube.* As illustrated in FIGS. 11-14 of the invention, gas is supplied by a single gas supply port and conveyed through a gas flow divider. The gas flow divider splits the gas between the first flow path provided by the center orifice and the second flow path provided by the plurality of small orifices. Gas that is divided by the center orifice enters the inner tube, and the gas divided by the plurality of small orifices enters the annular space. Because the inner tube has no orifices along its length, the gas exits the inner tube at its outlet end, and enters the annular space at the end opposite of the inlet end. In other words, gas from the inner tube enters the annular space at the opposite end of the inner tube where gas enters the annular space through plurality


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of orifices in the outer tube. Thus, gas is conveyed to both ends of the gas delivery metering tube, while employing *a single gas supply port connected to only one end of the gas delivery metering tube.*

Claims 4-10 recite further limitations to Claim 1, they are therefore patentable for at least the same reasons as for Claim 1 as described above.

In view of the foregoing, it is respectfully submitted that this application is now in condition for allowance. If any matters can be resolved by telephone, the Examiner is invited to call the undersigned attorney at the telephone number listed below. The Commissioner is hereby authorized to charge any other fees determined to be due to Deposit Account 50-2319 (Order No. A-67178-1/MSS/TJH(463035-420)).

Respectfully submitted,


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